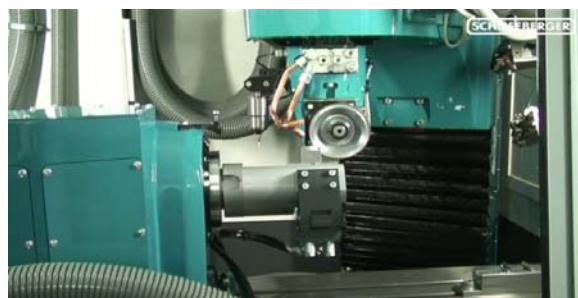
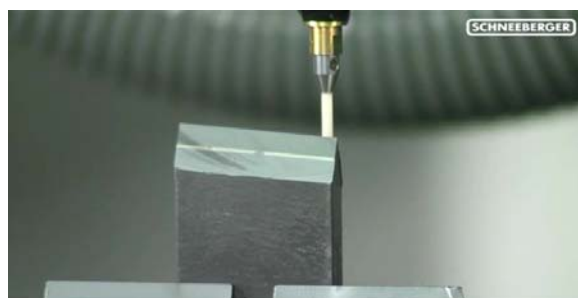


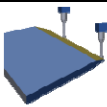
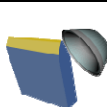
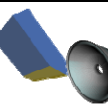
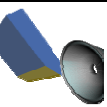
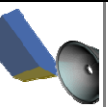





Punching Knife L40

A27-700

These specific knives are used in file production: the grooves are created with a punching process of the carbide tipped roof of the knife. The body of the knife is steel. Most of the knives have 2 clearances enabling to separate the reshaping process over 2 operations. The second clearance being in the steel body, a CBN wheel is used. Automatic loading of various geometries with a small integrated linear loader allows an autonomy over several hours.



1. Cycletime for Reshaping

Workpiece: LxHxB = 40x45x8 mm Material CARBIDE						
Operations						
Feed [mm/Min]	2000	130	130	180	180	5000
Power [kW]		2	2	1	1	1
Cutting speed [m/s]		32	32	20	20	
Used wheels						
Grinding time [s]	22	26	26	20	20	27
Total cycle time	2 Min 19					

The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.

2. Used Grinding Wheels

1	11V9 Ø100 B126
2	11V9 Ø100 D76



1

2

3. Machine and Software Requirements

Machines: 5 axes CNC grinders : ARIES 5

Control: Fanuc 31i

Accessories: MIL6046

Responsible engineer: OP, 20.1.14

Coolant: Synthetic Oil, pressure 6 bar

Software: Quinto 5

www.schneeberger.ch

J. SCHNEEBERGER Maschinen AG 4914 Roggwil Switzerland

Subsidiaries in: France, Deutschland, Italia, United States, China

TECHNOLOGY
FOR TOOLING